



# An analysis of the economy of pineapple marketing among rubber-based farmers

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## General Note



Article is recommended to print as color version in recycled paper. *Save Trees, Save Nature.*

## ABSTRACT

The study investigated the economy of pineapple fruit marketing in Edo State. Data collected using structural questionnaire to solicit information from sixty (60) randomly selected pineapple fruits marketers from the study area. The data were analyzed using descriptive statistics. The findings revealed that 57% of the respondents were below 60 years with an average of 42 years, 89% educated and 87% had less than 20 years' experience fruit marketing. The study further revealed that the respondents had a total ₦130,000 as marketing cost and generated a total revenue of ₦2,260,000. The Gross Margin per respondent was ₦35,500.00, while the marketing efficiency ratio (MER) and the profitability ratio (PR) were 1.06 and 9.83 respectively. This implies that pineapple fruit marketing in the study area was profitable and efficient. The major constraints were insufficient credit (31.7%) and fruits spoilage (43.3%). The study recommended that they should organize themselves into registered cooperative societies for self-financial support and to be able to have easy access to financial institutions and government and other credit agencies. The marketers should

also endeavor to provide adequate storage and processing facilities by having power supply alternative sources to avoid deterioration of the pineapple fruits so as minimize lost and to increase their returns on capital invested.

**Key Words:** Intercrop, Gross Margin, Marketing Efficiency, Pineapple.

## 1. INTRODUCTION

Agriculture, contrary to popular belief is still the main stay of Nigerian economy, contributing about 35 percent to the GDP. It offers employment to over 75 percent of the working population in the country. It provides the main source of the food and raw materials for both domestic use and exports (Osinowo, 2012). A major economic problem in Nigeria is the provision of food. This is as a result of population growth, poverty spread and predominant use of the traditional fallow system with short terms of lending led to declining agricultural products (Adinya, 2010). United Nations Development UNDP (1999) revealed that the development of agriculture in Nigeria is not meeting the demand of its teeming population despite the country's endowment with abundant vast range of natural, human and capital resources.

Rubber is a tree latex producing plant with about 5 – 7 years gestation period. This possesses some challenges to the rubber farmers who invest some huge amount of money and have to wait for this long period to start reaping from their investment. This prompted scientists to develop the rubber – arable crops intercropping system. Pineapple (*Ananas cosmosus*) is one of the suitable fruit crops that can be intercropped with rubber. Pineapple is also among the major agricultural produce based on nutritive value, it's a good raw material in confectionaries for making sweet fruit drinks and the juice immunes' one against fever parasite (Bartholowen, *et al*, 2011). It ranks third most important tropical fruit in the world after banana and citrus (Mark, 2010). Nigeria ranked 6<sup>th</sup> among the list of world pineapple producers with about 800,000 tonnes produced annually (Oladapo, *et al*, 2007; Manufacturing Today, 2011). Pineapple as an economic crop encourages potential for foreign exchange earnings. It can increase national income through expansion of local industries and higher income for farmer involved in its production and marketing (Adekanye, 1988).

The link between the producers and the consumers of any goods is the market. Marketing therefore plays a central role in development processes (Spore Magazine, 2008; Adesope *et al*, 2009). The study therefore wishes to evaluate pineapple marketing intercropped with rubber in Ikpoba-Okha Local Government Area of Edo State.

## 2. METHODOLOGY

The study was carried out in Ikpoba Okha Local Government Area (L.G.A) of Edo State. It has an Area of 862 Km<sup>2</sup> and a population density of 371,106 (NPC, 2006). The study area covered Ogbeson Market, Ekosa Market, Uhile Market, Obayantor Market, Umelu Market and Idogbo Market all in Benin City. A purposive random sampling technique was used in selecting the six (6) markets, and also 10 pineapple marketers were randomly picked from each of the markets on whom the questionnaire was administered on them. This brought the sample size to be 60 respondents. Data collected were analyzed by using descriptive statistics such as percentage, frequency distribution tables, mean, marketing efficiency and marketing margins.

### Analytical Models:

**Gross margin** is the difference between the total revenue and the total variable cost of the marketing chain. The formula is:

$$GM = TR - TVC \dots\dots\dots 1$$

Where:

GM = Gross Margin,

TR = Total Revenue

TVC = Total Variable Cost

**Marketing Efficiency and Performance:** Proposed measurement of the market performance, efficiency ratio, profitability ratio and operational efficiency are specified as follows:

$$ER = TR/TVC \dots\dots\dots 2$$

$$PR = TR/TC \dots\dots\dots 3$$

Where

ER = Efficiency Ratio

PR = Profitable Ratio

The rule of thumb states that if  $ER > 1$  and  $PR > 1$ , then the market evaluation is operationally efficient and vice-versa.

### 3. RESULTS AND DISCUSSION

#### Age and Educational levels of Respondents:

Table 1 show that approximately 57% of the respondents were below 60 years with an average of 42 years. This implies that the marketers were in their active ages and would be able to engage in various activities including pineapple fruits marketing to improve their livelihoods. The Table 1 also revealed that approximately 89% of the respondents had one form of education or the other with secondary education being the modal (50%) form of education among the respondents. This implies that the respondents were not illiterate, hence are able to read and right which help them carry out their marketing activities efficiently.

**Table1** Distribution of Respondents According to Age, Household size and Educational levels

Parameters	Frequency	Percentage (%)
<b>Age (years)</b>		
Less than 30	8	13.4
30-39	16	26.4
40-49	21	35.2
50-59	11	18.4
60 and above	3	5.0
<b>Total</b>	<b>60</b>	<b>100.00</b>
<b>Mean: 41.63 years; Standard Deviation: 11.87 years</b>		
<b>Educational Level</b>		
No formal Education	11	18.3
Primary Education	10	16.3
Secondary Education	30	50.00
Tertiary Education	3	5.0
Adult Education	6	10.0
<b>Total</b>	<b>60</b>	<b>100.00</b>
<b>Household size</b>		
Less than 10	36	63.3
10 – 19	14	23.5
20 and above	10	13.2

Source: computed from field survey Data, 2016

**Table 2** Distribution of Respondents According to Monthly Income from sales of Pineapple and Marketing Experience

Parameters	Frequency	Percentage (%)
<b>Monthly Income (Naira)</b>		
Less than 20,000.00	16	26.7
20,000.00 – 39,000.00	16	26.7
40,000.00 – 59,000.00	15	25.0
60,000.00 and above	13	21.6
<b>Total</b>	<b>60</b>	<b>100.00</b>
<b>Mean: 37,793.00; SD: N27, 254.33</b>		
<b>Marketing Experience (Yrs)</b>		
< 10	36	60.00

10 – 19	14	23.3
20 and above	10	16.7
<b>Total</b>	<b>60</b>	<b>100.00</b>

Source: computed from field survey Data, 2016

The result in Table 2 also indicates that approximately 87% of the respondents had less than 20 years marketing experience with only 13% having above 20 years. The average marketing experience was 9 years. This implies that pineapple marketers in the study area have been in the marketing business for many years hence would possibly be able to handle risks associated with the enterprise to maximize their profit. Table 2 shows that 78% of the respondents are generates less than N60, 000.00 monthly with an average of N 37,793.00. This implies that the pineapple fruits marketers in the study area generate enough income to take care of the marketing cost, sustain the family and save small amount for future investment into the business.

### Gross Margin Analysis:

The result of the Gross Margin analysis indicated that a total profit of ₦2, 030,000.00 was realized in the marketing of pineapple among the respondents per annum. The total revenue generated annually was ₦2, 260,000 while the cost of operation was ₦ 130,000 per annum. The result also revealed that the profit and gross margin per respondents were ₦ 33, 833.33 and ₦ 35,500 respectively. The size and positive values of marketing pineapple fruit obtained confirmed that pineapple marketers in the study area were able to generate enough income to take care of the cost and to increase their scale of business, hence is a profitable venture. The estimated efficiency ratio for pineapple marketing operation was 1, 06 which is greater than 1 (efficiency ratio > 1).

**Table 3** Gross Margin Analysis

Variables	Values (₦)
TC	230,000.00
TR	2,260,000.00
TVC	130,000.00
$T\pi$	2,030,000.00
$\pi/\text{respondent}$	33,833.333
GM	2,130,000.00
GM/respondent	35,500.00
<b>Measure of Market Performance</b>	
Efficiency Ratio	= 1.06
Profitability Ratio	= 9.83

Source: Computed from field Survey, 2016

It implies that marketing operation is efficient in the study area. The profitability ratio also shows 9.83, was positive; implying that the pineapple marketing operation among the respondents was profitable in the study area.

### Respondents' Marketing Constraints

Table 4 shows that all (100%) the respondents had one form of problem or the other with majority (43%) encountered high rate of spoilage of their pineapple fruits, while 32% had insufficient capital to finance their business. This may imply that high rate of spoilage and insufficient capital were the major impediments to pineapple fruits marketing in the study area. This confirms to many studies (Umar et al, 2014, Umar and Mesike, 2009).

**Table 4** Distribution of Respondents Based on Marketing Constraints

Constraints (%)	Frequency	Percentage
Insufficient Demand	19	15.0
Insufficient Capital	19	31.7
High cost of Transportation	4	6.7

High Rate of Spoilage	26	43.3
Insufficient Supply	2	3.3
<b>Total</b>	<b>60</b>	<b>100.0</b>

Source: Computed from field Survey, 2016

#### 4. SUMMARY

The study was carried out to analyze the economy of pineapple fruit marketing in Edo State. Data was collected using structural questionnaire, administered on sixty (60) randomly selected pineapple fruits marketers in the study area. The data were analyzed using descriptive statistical models. The findings revealed that 57% of the respondents were below 60 years with an average of 42 years; 89% were educated and 83.3% had less than 20 years' experience fruit marketing with average of 9 years. The finding further revealed that the respondents had a total ₦ 130,000 as marketing cost per and generated total revenue of ₦ 2,260,000. The Gross Margin per respondent was ₦ 35,500.00, while the marketing efficiency ratio (ER) and the profitability ratio (PR) were 1.06 and 9.83 respectively. This implies that pineapple fruit marketing in the study area was profitable. The major constraints were pineapple spoilage (43%) and insufficient capital (31.7%) for the business.

#### Recommendations

The Pineapple fruits marketers should organize themselves into registered cooperative societies for selves' financial support and to be able to have access to government financial institutions. They should try to provide adequate storage and processing facilities as well as alternative source to power supply to avoid deterioration of the pineapple fruits thereby increasing their returns on the capital invested.

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**Peer-review:** External peer-review was done through double-blind method.

**Data and materials availability:** All data associated with this study are present in the paper.

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